required by embodiments of the invention. For example, the processor could be a processor from the Pentium® family of processors made by Intel Corporation.

[0069] The machine-readable media can be any type of media capable of storing instructions adapted to be executed by the processor. Some examples of such media include, but are not limited to, system RAM 30, read only memory (ROM), programmable ROM, magnetic disk (e.g., floppy disk and HDD 36), optical disk (e.g., CD/DVD ROM 38), and any other device that can store digital information. As used herein, the phrase "adapted to be executed by a processor" is meant to encompass instructions stored in compressed and/or encrypted format, as well as instructions that have to be compiled or installed by an installer before being executed by the processor. The processor and machine-readable medium may be part of a computer system 600 where various combinations of machine-readable media store combinations of the audio software which are accessible by the processor through various controllers.

[0070] The audio software provides all the functionality to load and operate the mini-OS and hence the PC system as previously detailed. Again, the mini-OS itself could be implemented as part of the larger OS or could be an "algorithm," a "script", a "code", a "program", a "routine" or a "subroutine."

[0071] Operation of the computer system 600 is detailed below with reference to the exemplary sequence 200 of FIG. 2. As earlier detailed, at some time prior to the initiation of the audio player function of a PC equipped with the present invention, the user downloads (not shown in FIG. 2) the audio files of interest to the HDD 36 or burns a CD-ROM that is placed in the CD/DVD ROM drive 38 for use with the audio player feature of the present invention. As shown, at step 201, the sequence 200 begins when the user presses either an audio player power switch 54 or the computer's main power switch, to turn the system on. A determination is then made, at step 202, whether the computer is to boot in normal operation mode or compressed audio performance mode. This determination is typically made in the BIOS, based on whether the computer's power switch or an audio player power switch 54 was used to turn on the computer, although those skilled in the art will recognize that this determination could alternatively be made by an application program or an operating system that provides such capability (e.g. Windows® 98).

[0072] If normal PC operation mode is desired, the system boots to normal operation mode at step 203, and the normal OS, e.g., Windows® 98, is loaded into system RAM 30 and executed. Just as the special circuit 40 was bypassed in such a situation, audio software consistent with the invention is not responsive to a request to operate the PC in normal operation mode.

[0073] If compressed audio mode is desired, the audio software is enabled by one of a variety of enabling techniques. For instance, the audio player power switch 54 may be utilized or a software based selection technique may be utilized. Once the audio software is enabled, it instructs the system to load the mini-OS in system RAM 30 at step 204. Advantageously, the boot up time of the PC utilizing the mini-OS to boot up in a compressed audio mode is faster than the boot up time of the PC utilizing a traditional OS to boot up in normal PC mode. In this way, a user can quickly listen to a variety of audio files without waiting for the longer boot up time of the PC in normal PC mode.

[0074] Then at step 205, the mini-OS initializes the system 600 components including one or more of the North Bridge 28, South Bridge 32, hard drive 36, CD/DVD-ROM drive 38, codec 42, and CPU 26. In addition, the CPU 26 utilizes the audio software to control data flow to the Codec 42 and to perform the various power management functions earlier detailed.

[0075] Since no audio decompression request will be pending upon system initialization (i.e., the memory buffer is not full), which determination is made at step 208, the system waits for input from one of the function keys 48, at step 207, until one of the function keys 48 is activated. At this time, the appropriate function is executed and the LCD display 34 may be updated, as appropriate, at step 206. If the command includes a request from the user to play audio, an audio decompression request will be pending at this time, which determination is made at step 208.

[0076] Since no compressed audio file(s) are usually in system memory 30 upon the initial request to play audio, which determination is made at step 209, the compressed audio file(s) are read from the HDD 36 and/or the CD/DVD ROM drive 38 and/or the portable memory media 80 and loaded into system memory 30, at step 210. For instance, the compressed audio files could be on a CD or DVD as read by the CD/DVD ROM drive 38. After the compressed audio files are loaded into system memory at step 210, or if the audio file(s) are already in system memory, which determination is made at step 209, the audio files are then decompressed, at step 211, using the system CPU 26.

[0077] DMA transfer(s) to the codec 42 are initialized for the decompressed audio data, at step 212, and then the output signal from the Codec 42 is amplified (not shown in FIG. 2) by the amplifier 44 to drive the speakers and/or headset 46. After the DMA transfer(s) are initialized, at step 212, control loops back to step 208, to determine whether an audio decompression request is pending.

[0078] Although the present invention has been described in terms of the exemplary embodiments provided herein, it is to be understood that such disclosure is purely illustrative and is not to be interpreted as limiting. Consequently, without departing from the spirit and scope of the invention, various alterations, modifications, and/or alternative applications of the invention will, no doubt, be suggested to those skilled in the art after having read the preceding disclosure. Accordingly, it is intended that the following claims be interpreted as encompassing all alterations, modifications, or alternative applications as fall within the true spirit and scope of the invention.

What is claimed is:

1. A machine-readable medium whose contents cause a computer system to perform a method of playing audio files, said method comprising:

reading compressed audio data;

providing said compressed audio data to a processor of said computer system for decompressing said audio data, thereby providing decompressed audio data; and

storing said decompressed data in a memory of said computer system.